Pulse Shift

83155

S/108/60/015/009/007/008
B002/B067

teristics. The author thanks V. F. Kozhukhov for his assistance. There are 4 figures and 1 table.

SUBMITTED: May 30, 1960

Card 2/2

DROBYSHEV, Yu. P., Cand Tech Sci -- "Certain problems of the magnetic recording of broad-banded and ~~impulsive~~ pulse signals." Mos, 1961. (Min of Comm USSR. Len ~~Electrotech~~ Electrical Eng Inst of Communications) (KL, 8-61, 243)

DROBYSHEV, Yu. P.

Concerning the density of magnetic recording. Elektrosviaz'15 no.6:57-61 Je '61. (MIRA 14:6)
(Magnetic recorders and recording)

9,7910
6,9300

S/108/61/016/001/006/007
B010/B077

AUTHORS: Goron, I. Ye., Member of the Society, Drobyshev, Yu. P., Member of the Society

TITLE: Information Density of Wide-band Signal Recorders

PERIODICAL: Radiotekhnika, 1961, Vol. 16, No. 1, pp. 59 - 66

TEXT: In order to characterize different types of magnetic recording methods for video signals or other wide-band signals, the authors introduce an "information density" ν which is formed by parameters of the signal, the tape, and the recording method, and is defined as the information quantity I stored per unit surface of the tape. If ΔF stands for the signal bandwidth, T for the signal period, m for the level, then, on account of the equation $I = 2\Delta FT \log_2 m$, the information density is found to be (I) $\nu = 2\Delta FT \log_2 m/S$; S denotes the area of tape, for which $S = N(b + d)v_g T_o$ holds; N denotes the number of tracks, b the track width, d the track spacing, v_g the tape velocity, T_o the recording time

Card 1/4

of one track. (I) depends on the method of recording: According to the A,A' method (cf. Table 1), the total signal is recorded on one track only (old RCA method). Here, ν equals $\frac{2\Delta F \log_2 m}{(b + d)v_g}$. According to the B,B' method, the total signal bandwidth ΔF is divided into N subranges which are recorded separately on N tracks (BBC method, England); here, ν equals $\frac{2\Delta f \log_2 m}{(b + d)v_g}$. The V' method is based on the following principles: a) a total signal period T is divided into N time intervals of the duration t_i which are successively recorded on N tracks (Ampex method which goes back to K. L. Isupov and I. S. Rabinovich); ν is the same as found for the A,A' method; b) the signal is represented by a sequence of pulses according to the theorem of Kotel'nikov, which are recorded alternately on N tracks (Bing Crosby method, USA); ν is the same as for B,B'. Table 1 shows numerical values, and it is easily seen that bandwidth and frequency of a track channel greatly influence the value of

ν. Very good values for ν are obtained if $f_v/f_n = 10 \div 20$ (f_v,f_n are the cutoff frequencies of a track channel) since here it is possible to get the maximum balance between track spacing and recording velocity. Furthermore, the well-defined structure of the definition equation (I) permits a simple estimation of the influence of the operating factors on the information density. There are 3 figures, 2 tables, and 7 references: 2 Soviet and 5 US.

SUBMITTED: September 14, 1960

Legend to Table 1: 1) system; 2) Δf, Mc; 3) method of signal transformation; 4) approximation.

Card 3/4

88379

S/108/61/016/001/006/007
B010/B077

Система 1	Δf Мгц 2	$m_к$	b мм	d мм	$b+d$ мм	v_2 м/сек	ν дв. ед./мм²	Метод преобразования сигнала (рис. 1)
RCA (цветное ТВ)	$0,4\cdot10^{-3}\div1,5$ $1,5\div3,5$	9	1,5	0,76	2,26	6,1	610	А + А′ + Б
VERA (BBC)	$0\div0,1$ $0,1\div3$	—	—	—	—	5,1	—	Б + Б′
Bing Crosby	0,19	8*	—	—	0,8	2,5	570	В′
Ampex	4	14	0,25	0,125	0,375	38,1	2100	В′

4 *) Вычислено приблизительно.

Table 1

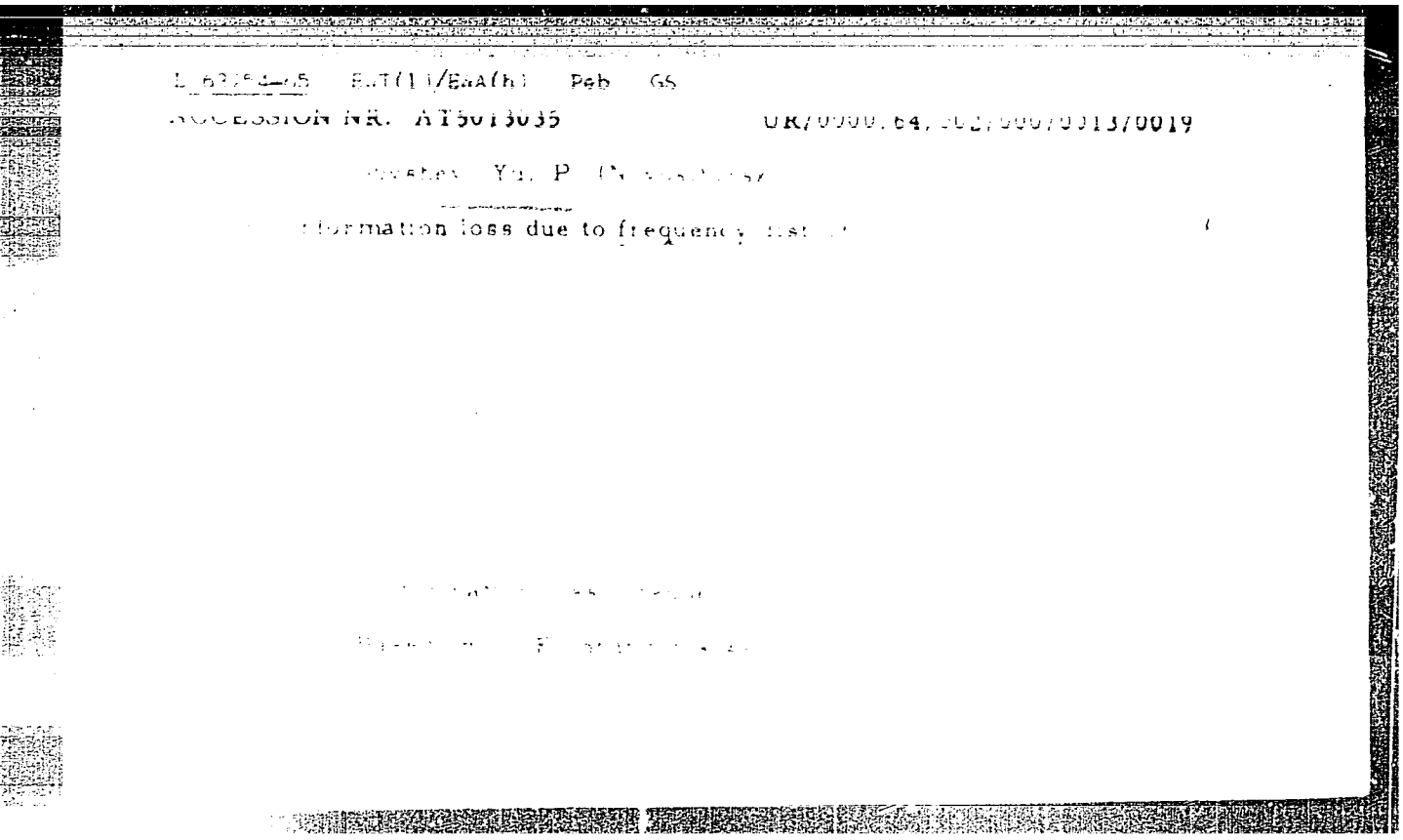
Card 4/4

DROBYSHEV, Yu. P.,

"Some Problems in Magnetic Recording of Broadband and Pulsed Signals." Dissertation for the Degree of Candidate of Sciences, Leningrad Electrotechnic Inst. of Communication im. M. A. Bonch-Bruyevich. Defense held on 12 October 1961.

In the work, an investigation was made of the density of magnetic recording of broadband and pulsed signals form the point of view of information theory. A comparison analysis is given of the existing systems for magnetic recording of broadband signals.

Izv Vysshikh ucheb. zaved MViSSO SSSR po razdelu Radiotekhnika, vol. 6, No. 1, 1963 p. 98-102 (Original checked--Cand. of Sciences as in original.)

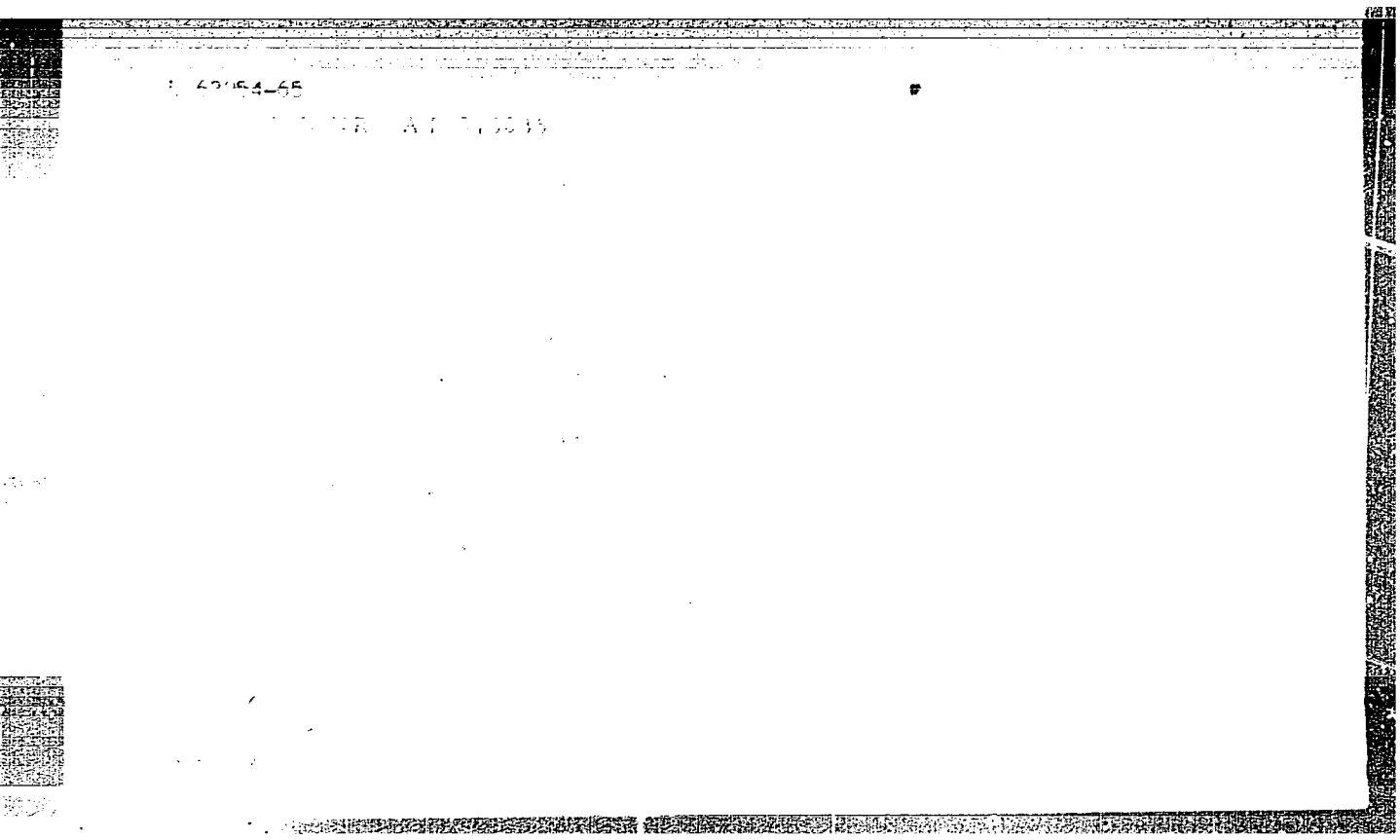


L 63[illegible]-65 EWT(l)/EWA(h) Peb GS

ACCESSION NR: AT5013035 UR/0000/64/[illegible]/0013/0019

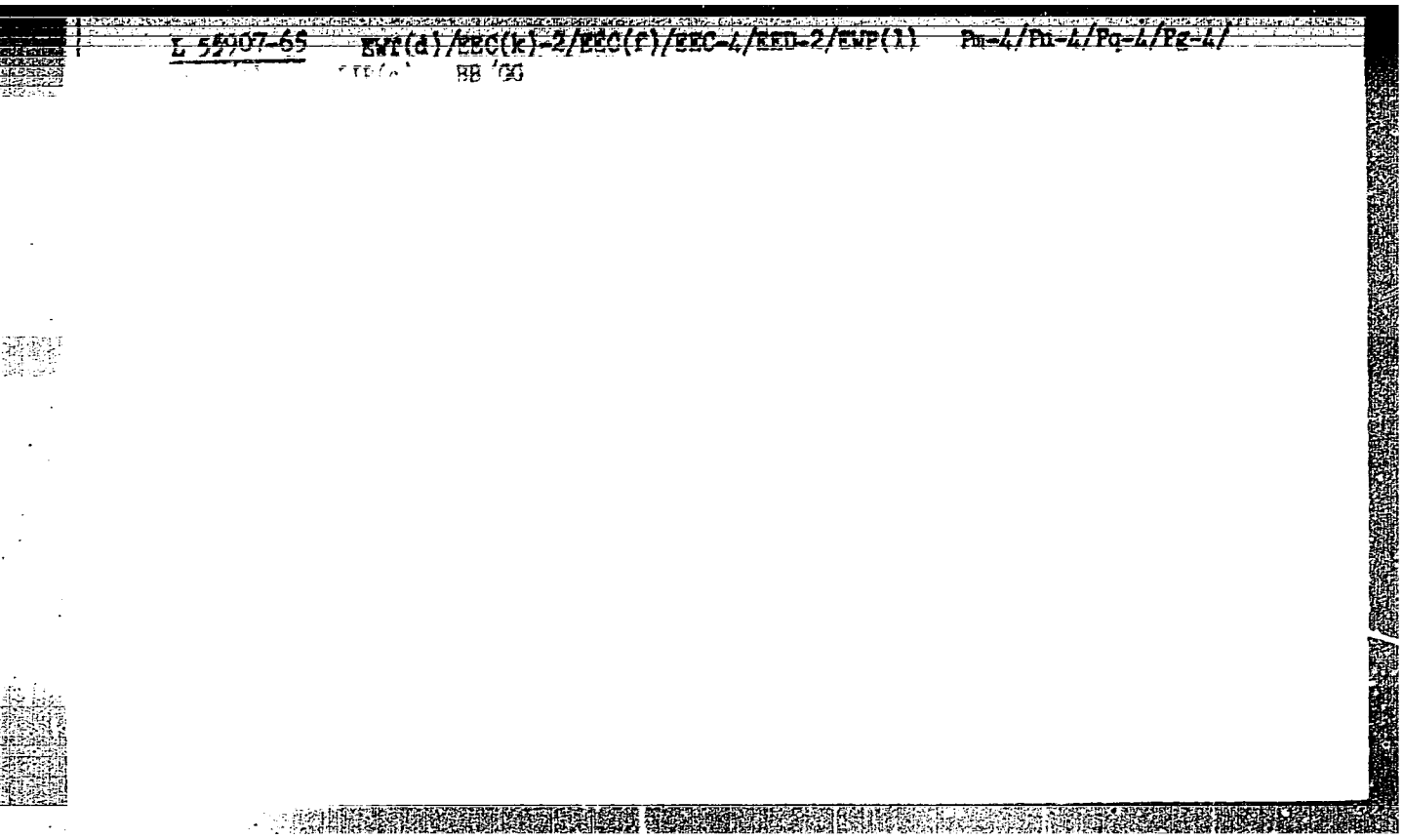
[illegible] Yu. P. [illegible]

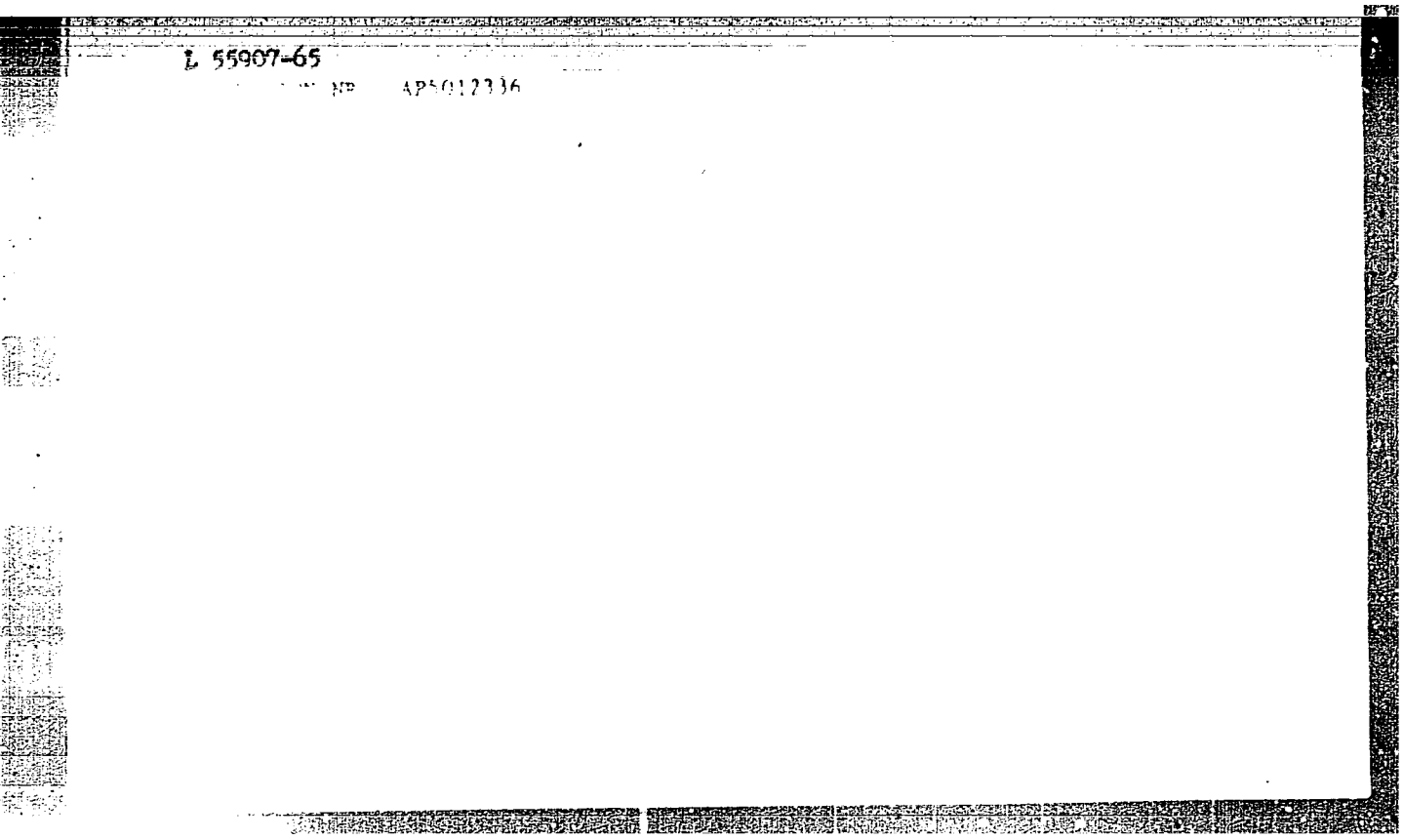
Information loss due to frequency [illegible]



DROBYSHEV, Yu.P.

Quantization in presence of multiplicative noise. Trudy Inst. avtom. i elektrometr. SO AN SSSR no.9:28-38 '64.
(MIRA 17:11)





L 33480-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) GD/EC
ACC NR: AT6011925 SOURCE CODE: UR/0000/66/000/000/0036/0042

50
B71

AUTHOR: Drobyshev, Yu. P. (Novosibirsk)

ORG: none

TITLE: Reduction in the capacity of the measurement signal 14

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy, 5th. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Izmeritel'nyye informatsionnyye sistemy. Ustroystva avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Information measurement systems. Automatic control devices. Electrical measurements of nonelectrical quantities). Novosibirsk, Izd-vo Nauka, 1966, 36-42

TOPIC TAGS: information processing, measuring system, analog digital conversion

ABSTRACT: Complex involved measurements are characterized by a large amount of measured quantities. The paper deals with the related problem of signal compression and the establishment of relationships between this problem and those existing in other branches of science which could be used in the technology of measurements. Following the basic formulation of the problem, the author discusses the general continuous-to-discrete conversion of signals, the approximation criterion, and adaptive systems. Extensive suggestions concerning new ways in measuring instrument design are also given. Orig art. has: 12 formulas and 1 figure.

14

Card 1/2

L 33480-66
ACC NR: AT6011925

SUB CODE: 09 / SUBM DATE: 29Nov65 / ORIG REF: 006 / OTH REF: 002

Card 2/2 MQS

ACC NR: AT7004921 SOURCE CODE: UR/0000/66/000/000/0013/0019

AUTHOR: Vittikh, V. A. (Novosibirsk); Ginzburg, A. N. (Novosibirsk); Drobyshev, Yu. P. (Novosibirsk)

ORG: none

TITLE: Methods of measurement signals compression [Classification and review]

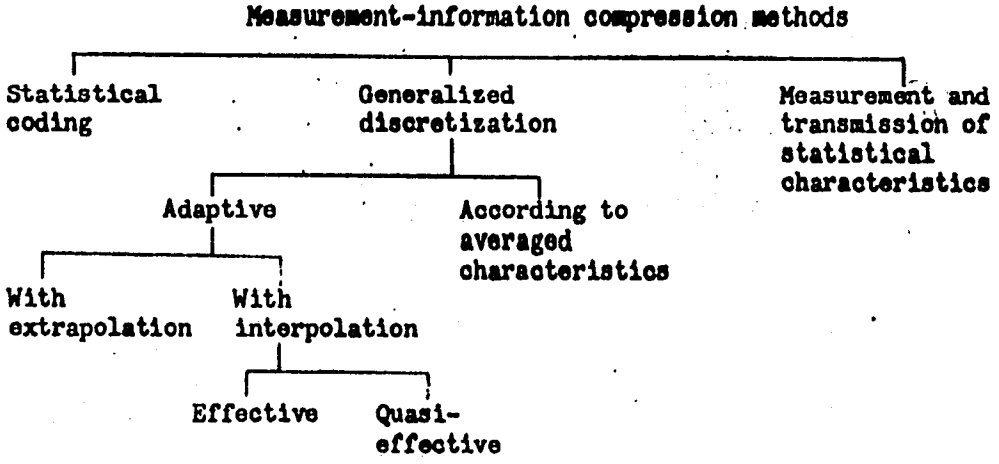
SOURCE: Vses. konf. po avtomatich. kontrol i metodam elektrich. izmereniy, 6th, 1964. Avtomatich. kontrol' i metody elektrich. izmereniy; tr. konf., t. I: Teoriya izmerit. info. sistem (Automatic control and electrical measuring techniques; transactions of the conference, v. 1: Theory of measuring information systems). Novosibirsk, Izd-vo Nauka, 1966, 13-19

TOPIC TAGS: measurement, information processing, data processing, ~~information compression~~ signal coding

ABSTRACT: Based on ten 1955-66 Soviet sources and one 1962 U.S. source, a classification diagram (see figure) is presented, and modern information-compression methods are reviewed. Compression of information by measuring signal statistics (H. Blasbalg et al., IRE Trans., no. 3, Sep 1962) is explained. Another group of methods (statistical coding) using signal statistics converts a sequence of messages at

Card 1/3

ACC NR: AT7004921



the input into output binary signals. Unlike the preceding method, these methods preserve the sequence of events. In the predictive coding method, statistical redundancy is eliminated; only the difference signal (real value minus predicted value) is transmitted; the well-known delta-modulation method belongs with this group. The methods of general discretization are subdivided into two large groups: (1) Averaged-

Card 2/3

ACC NR: AT7004921

characteristic group in which the quantization interval is either selected from the maximum frequency of signal spectrum (Kotel'nikov's theorem) or is set under the correlation interval (continuous quasi-stationary signals with unlimited spectrum); in both cases, the quantization interval is constant; (2) Adaptive methods in which the quantization interval is variable; it depends on the present signal characteristic (e.g. its present derivative). The choice of compression method depends on the demands of the information recipient, viz., on the proximity criteria, complexity of materialization, permissible signal delay, etc. Methods of compression of signal connected with the reduction of its entropy seem promising; of these, most efficient are the methods of generalized adaptive discretization with extrapolation or interpolation of signals. Orig. art. has: 2 figures and 11 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 010 / OTH REF: 001

Card 3/3

ACC NR: AT7004922 SOURCE CODE: UR/0000/66/000/000/0020/0023

AUTHOR: Vittikh, V. A. (Novosibirsk); Ginzburg, A. N. (Novosibirsk); Drobyshev, Yu. P. (Novosibirsk)

ORG: none

TITLE: Method of discretization of measurement signals

SOURCE: Vses. konf. po avtomatich. kontrol i metodam elektrich. izmereniy, 6th, 1964. Avtomatich. kontrol' i metody elektrich. izmereniy; tr. konf., t. I: Teoriya izmerit. info. sistem (Automatic control and electrical measuring techniques; transactions of the conference, v. 1: Theory of measuring information systems). Novosibirsk, Izd-vo Nauka, 1966, 20-23.

TOPIC TAGS: measurement, information processing, data processing, ~~information compression~~ signal element

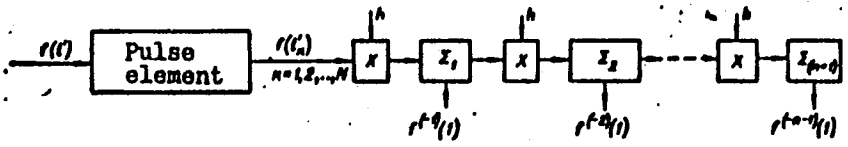
ABSTRACT: Assuming that a certain delay in measurand transmission and a certain error are permissible, the following method of quantization and compression of measurement signals is suggested: The signal f(t) is expanded into an orthogonal-function series within interval $a \leq t \leq b$, and only expansion coefficients are transmitted over the communication channel. Calculation of the first $n+1$ coefficients c_0, $c_1, \ldots, c_n$ is reduced to multiplying the vector $\vec{d} = [\varphi^{(n-1)}(b), -\varphi^{(n-2)}(b), \ldots, (-1)^n \varphi^{(-n-1)}(b)]$

Card 1/2

ACC NR: AT7004922

by the matrix $A = \begin{bmatrix} \hat{P}_0(b), 0, \ldots, 0 \\ \hat{P}_1(b), \hat{P}_1^{(1)}(b), \ldots, 0 \\ \ldots\ldots\ldots\ldots \\ \hat{P}_n(b), \hat{P}_n^{(1)}(b), \ldots, \hat{P}_n^{(n)}(b) \end{bmatrix}$ or $\begin{bmatrix} c_0 \\ c_1 \\ \vdots \\ c_n \end{bmatrix} = \bar{d} \cdot A$

Here, A remains constant and $\bar{d}$ depends on f(t); hence, it is sufficient to transmit components of $\bar{d}$ which are the results of successive integrations of f(t) or a modified function $f(t')$. The latter is applied to a pulse element (see figure) which generates regular pulses corresponding to the function values and sends them to multiplying unit x which multiplies them by the integration interval h. A series of summators prepares final signals. The system can be further simplified in the cases where multiplying-by-h operations can be performed at the receiving end. The method is offered for telemetry systems, particularly for the cases where the automatic processing at the transmitting end must be simple. Orig. art. has: 2 figures and 13 formulas.



SUB CODE: 09 / SUBM DATE: none / ORIG REF: 006

Card 2/2

DROBYSHEVA, D.V., red.; KAZARINOVA, V.P., red.; CHIZHOV, A.A., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Geology and oil potential of the West Siberian Plain.] Geologiia i neftenost' Zapadno-Sibirskoi nizmennosti. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Leningradskoe otd-nie. 1958. 273 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.114) (MIRA 12:6)

(West Siberian Plain--Petroleum geology)

DROBYSHEVA, M.I.

DROBYSHEVA, M.I., gidrokhimik

Magnitogorsk Reservoir as a receptor of industrial sewage. Gig. i san. 22 no.5:78-80 My '57. (MIRA 10:10)

1. Iz Magnitogorskoy sanitarno-epidemiologicheskoy stantsii.
(SEWAGE,
discharge in indust. into rivers (Rus))
(WATER SUPPLY,
discharge of indust.sewage into rivers (Rus))

DROBYSHEVA, Nina Aleksandrovna; SINITSYNA, N.S., red.; TRUKHINA, O.N., tekhn. red.

[Carrots, parsley, and parsnips] Morkov', petrushka, pasternak. Moskva, Gos. izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1961. 93 p. (MIRA 15:3)
(Carrots) (Parsnips) (Parsley)

POTAPOV, N.G.; SALAMATOVA, T.S.; DROBYSHEVA, N.I.

Some properties of mitochondria of cells in the growing zones of lupine roots. Nauch. dokl. vys. shkoly; biol. nauki no.4: 121-127 '64. (MIRA 17:12)

1. Rekomendovana kafedroy fiziologii rasteniy Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.

DROBYSHEVA, N. S. and BLINOV, N. I.

"Significance of the Rh Factor in the Cleinical Aspects of Blood Transfusion," Sov. Vrach (Soviet Physician), Issue 12, p 25, 1948.

DROBYSHEVA, N.S.

BAKSHT, G. A.; DROBYSHEVA, N. S.

Correlation of Rh-positive and Rh-negative factor in maternal and newborn blood. Sovet. med. no.8:14-16 Aug 1951. (CLML 20:11)

1. Prof. Baksht; Scientific Associate Drobyshev. 2. Leningrad.

SOLOV'YEVA, T.G.; DROBYSHEVA, N.S.

Significance of Coomb's reaction in hemolytic disease of newborns. Probl. gemat. i perel. krovi 4 no.6:23-26 Je '59 (MIRA 12:8)

1. Iz izoserologicheskoy laboratorii (zav. - doktor med. nauk T.G. Solov'yeva) Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniya krovi (dir. - dots. A.D. Belyakov, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A. N. Filatov).

(ERYTHROBLASTOSIS, FETAL, diag.
Coomb's reaction (Rus))

DROBYSHEVA, N.S., Geroy Sotsialisticheskogo Truda

Worthy successors. Prof.-tekh. obr. 22 no.9:6 S '65. (MIRA 18:9)

1. [redacted] master sterzhnevogo otdela Rostovskogo zavoda sel'skokhozyaystvennogo mashinostroyeniya "Rostsel'mash".

AUTHORS: Varlamov, M. L., Drobysheva, O. M. S/153/60/003/01/040/058 B011/B005

TITLE: Investigation of the Absorption Process of Nitrogen Oxides of Low Concentrations by Soda Solutions in an Apparatus of the Venturi Tube Type

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol 3, Nr 1, pp 146-150 (USSR)

TEXT: It was the object of this paper to study the influence of various factors on the absorption mentioned in the title. These factors include: the linear velocity of the gas in the tube (Fig 2), the concentration of nitrogen oxides (Fig 4), the degree of their oxidation α, the concentration of the soda solution (Fig 4), and the ratio between gas- and liquid consumption of the apparatus (g : liqu). Figure 1 shows a diagram of the experimental plant. The volume coefficients of the absorption rate were computed from the analytical data by formula (1), and the results were converted for elementary nitrogen. The authors discuss all mentioned factors separately, and compare the data obtained with those obtained by other apparatus. On the basis of this comparison, the authors arrive at the conclusion that the Venturi tube type apparatus are among the most efficient ones. There are 4 figures and 19 references, 15 of which are Soviet.

Card 1/2

Investigation of the Absorption Process of Nitrogen Oxides of Low Concentrations by Soda Solutions in an Apparatus of the Venturi Tube Type

S/153/60/003/01/040/058
B011/B005

ASSOCIATION: Odesskiy politekhnicheskiy institut; Kafedra tekhnologii i avtomatizatsii khimicheskikh proizvodstv (Odessa Polytechnic Institute; Chair of Technology and Automation of Chemical Production)

SUBMITTED: January 6, 1959

Card 2/2

VARLAMOV, M.L.; DROBYSHEVA, O.M.

Mass transfer and chemisorption in an apparatus of the type of the Venturi tube. Zhur. prikl. khim. 33 no.9:2020-2029 S '60. (MIRA 13:10)

(Venturi tubes) (Mass transfer)

DROBYSHEVA, O. M.

Cand Tech Sci - (diss) "Study of the process of absorption of readily and poorly soluble gases in apparatus of the Venturi tube type." Khar'kov, 1961. 16 pp; (Khar'kov Polytechnic Inst); 200 copies; price not given; (KL, 10-61 sup, 214)

5(2),5(4)

AUTHORS: Yatsimirskiy, K. B., Drobysheva, O. M., Rigin, V. I.

SOV/75-14-1-11/32

TITLE: Kinetic Methods of Quantitative Analysis (Kineticheskiye metody kolichestvennogo analiza). Communication 5. A Kinetic Method for the Quantitative Determination of Tantalum (Soobshcheniye 5. Kineticheskiy metod kolichestvennogo opredeleniya tantala)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 1, pp 60-62 (USSR)

ABSTRACT: In the present paper the catalytic effect of tantalum (V) compounds on the oxidation of iodides with hydrogen peroxide in acid solution is made use of for the elaboration of a kinetic method for the quantitative determination of small quantities of tantalum. All the reagents used were carefully cleaned from heavy metals. The tantalum solution was treated with certain quantities of potassium iodide and starch solutions and carefully intermixed. The required quantity of hydrogen peroxide was then added. After renewed intermixing the solution was measured in a photo-colorimeter FEK-M at regular

Card 1/3

time intervals. Initial concentrations were: tantalum 2.10^{-6} - 5.10^{-5} m; potassium iodide 2.10^{-4} - 2.10^{-3} m; hydrogen peroxide 2.10^{-4} - 2.10^{-3} m; hydrochloric acid 0.1 - 0.5 m. To obtain an equation for the reaction velocity, the dependence of the latter on the concentration of the individual reagents was investigated. Basing on the results illustrated in diagrams the reaction velocity can be formulated as follows:

$$\frac{d\,[J_2]}{d\tau} = (x_0 + x_1 C_{H^+}) \cdot C_{J^-} \cdot C_{H_2O_2} \cdot C_{Ta} \cdot$$

where C_{J^-} , $C_{H_2O_2}$, C_{H^+} , C_{Ta} are the respective concentrations, x is the velocity constant of reaction (catalysis coefficient). Also the influence of foreign ions upon the accuracy of tantalum determination according to this

Kinetic Methods of Quantitative Analysis. SOV/75-14-1-11/32
Communication 5. A Kinetic Method for the Quantitative Determination of Tantalum

Abstract: method was investigated. It was found that in solutions containing no reaction catalyzing elements, large quantities of the usually present cations and anions do not cause any disturbance. Fluorides retard reaction, as they bind tantalum to a complex. The accelerating effect of nitrate ions is explained by traces of nitrite, by which reaction is catalyzed; titanium and zirconium do not disturb, as their oxalate complexes do not catalyze the reaction (Ref 1). Nor does niobium up to a three-fold excess disturb the determination of tantalum. The same applies for sulfates in concentrations of up to 0.1 m. The new method described for the determination of tantalum is high-sensitive. There are 4 figures, 1 table, and 4 references, 3 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut
(Ivanovo Chemical-Technological Institute)

SUBMITTED: January 20, 1958

Card 3/3

DROBYSHEVA, O.M.; RASKIDKIN, V.K.

Kinetics of ammonia absorption by its aqueous solutions in a column with gridless sieve plates. Trudy IREA no.25:437-445 '63.

Heat transfer through the walls of a coil pipe under bubbling-foaming conditions. Ibid.:446-449

DROBYSHEVA, O.M.; RASKIDKIN, V.K.

Kinetics of ammonia absorption by its aqueous solutions in a column with gridless sieve plates. Trudy IREA no.25:437-445 '63.

Heat transfer through the walls of a coil pipe under bubbling-foaming conditions. Ibid.:446-449

(MIRA 18:6)

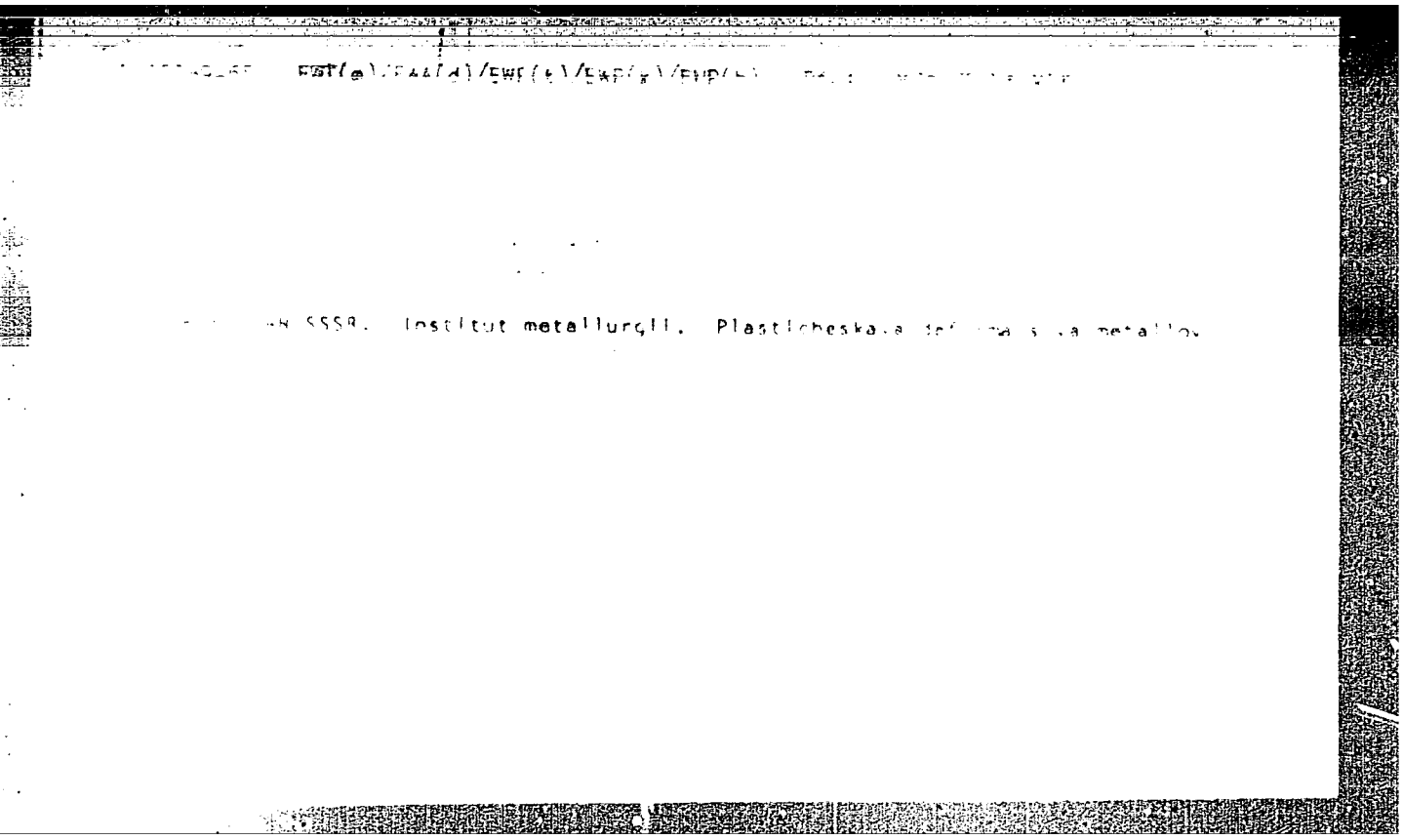
DROBYSHEVA, S. S.

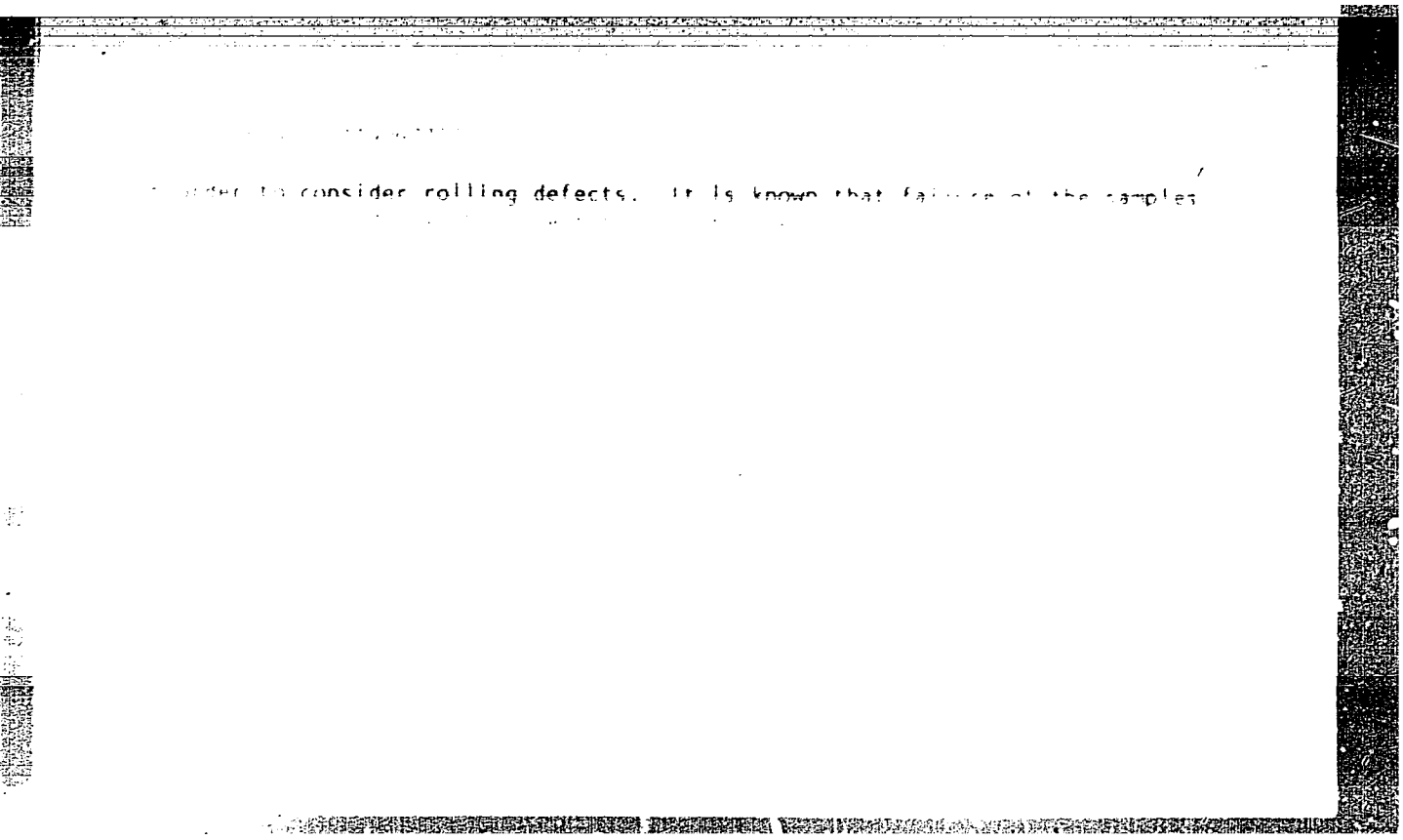
Cand Biol Sci - (diss) "Features of the biology of Euphausiacea as feeding objectives of codfishes in the shallows of the southern part of the Barents Sea." Murmansk, 1961. 16 pp; (Moscow Order of Lenin and Order of Labor Red Banner State Univ imeni M. V. Lomonosov); 120 copies; price not given; (KL, 5-61 sup, 183)

DROBYSHEVA, S.S. (Murmansk); SOLOV'YEV, B.S. (Murmansk)

Into the sea depths with a bathyscaphe. Priroda 53 no.1:99-101 '64.

1. Polyarnyy anuchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.





ACC NR: AT7004416 (A) SOURCE CODE: UR/0000/66/000/000/0083/0085

AUTHOR: Osipov, V. G.; Drobysheva, Ye. K.; Ushakov, Ye. V.; Amosov, V. M.; Zelentsova, N. M.; Borisov, A. G.

ORG: none

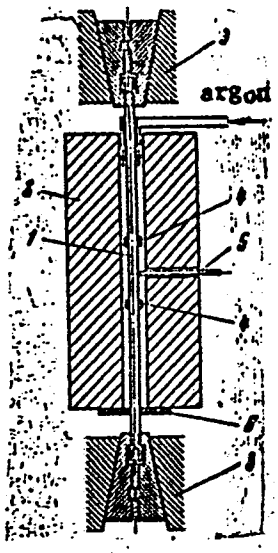
TITLE: Methods of tensile and torsion tests of thin rods at elevated temperatures

SOURCE: AN SSSR. Institut metallurgii. Napryazhennoye sostoyaniye i plastichnost' pri deformirovanii metallov (Stress condition and plasticity during metal deformation). Moscow, Izd-vo Nauka, 1966, 83-85

TOPIC TAGS: metal test, ~~all-purpose~~ metal testing machine, tensile test, torsion test, torsion stress, temperature test/ R-5 ~~all-purpose~~ metal testing machine

ABSTRACT: Tests of this kind require a vacuum or a protective atmosphere, which involves considerable technical difficulties. However, in cases where complete prevention of oxidation of the specimen is not required an airtight working chamber does not have to be constructed. Furthermore, the need to use scarce high-temperature materials for the clamps can be obviated if during the tests only the middle portion of the specimen is heated and the deformation is measured over a segment for which the temperature gradient is within permissible limits. On the basis of these considerations the following method of high-temperature tensile tests was developed: an argon-atmosphere electrical resistance furnace (Fig. 1) is attached between the clamps of

Card 1/3



an R-5 all-purpose testing machine. Mounted in the central part of the specimen at a distance of 40 mm from each other are two bushings serving to identify the working length of the specimen and facilitate measurements of the degree of deformation. A specimen measuring 3 or 6 mm in diameter and 250 mm in length is inserted in the furnace so that its both ends protrude 50 mm each from the furnace. Tensile tests of such specimens at up to 1300°C demonstrated that, despite the absence of an air-tight chamber, there is virtually no oxidation. However, the formation of a neck, which complicates the evaluation of test results, is a major shortcoming of tensile tests. From this standpoint, torsion is superior to stretching, since it assures a more uniform lengthwise distribution of deformations in the specimen, which is particularly important to the tests of metals in a state of low plasticity. Accordingly, the following method

Fig. 1. Schematic of tensile test:

1 - specimen; 2 - furnace; 3 - clamp; 4 - bushing; 5 - thermocouple; 6 - washer

ACC NR: AT7004416

of high-temperature torsion tests was developed: specimen 1 is placed in furnace 2 (Fig. 2) and its ends are held tight in clamps 3. Mounted in the central portion of the specimen, at a distance of 40 mm from each other, are two bushings 4 clamping the ends of two high-temperature steel plates 5 whose opposite ends protruding for 20 mm outside the furnace display arrows 6. The angle of twist over the 40 mm length is determincd according to the difference in the angles of rotation of the arrows and reckoned from fixed disks 7.

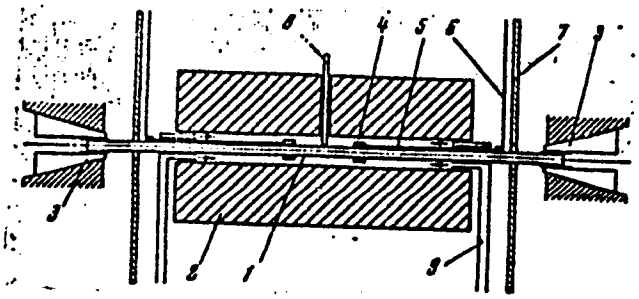


Fig. 2. Schematic of torsion test

These methods in principle admit the possibility of performing tensile and torsion tests at temperatures as high as desired, since the clamps are outside the furnace. The material of bushings 4 and plates 5 may be selected according to test temperature. Orig. art. has: 4 figures.

SUB CODE: 13, [illegible], 11/ SUBM DATE: 27Sep66/ ORIG REF: 003/ OTH REF: 001

Card 3/3

ACC NR: AT7004418 SOURCE CODE: UR/0000/66/000/000/0099/0102

AUTHOR: Osipov, V. G.; Drobysheva, Ye. K.; Khazanov, B. I.

ORG: none

TITLE: Device for observing plastic deformation and fracture under a microscope

SOURCE: AN SSSR. Institut metallurgii. Napryazhennoye sostoyaniye i plastichnost' pri deformirovanii metallov (Stress condition and plasticity during metal deformation). Moscow, Izd-vo Nauka, 1966, 99-102

TOPIC TAGS: metallographic microscope, metallurgic ~~research~~ analysis, metallographic examination, plastic deformation, material fracture/ MIM-8M metallographic microscope

ABSTRACT: The authors developed an elementary device (Fig. 1) for scrutinizing the microstructure of specimens that are tensile-tested at room temperature by stretching with the aid of a worm gear drive (manually or by means of an electric motor). The device consists of frame 1 attached to the microscope mount. Slider 4 moves along the rectangular window of the frame. Rotation of worm wheel-nut 14 causes translational motion of the screw pulling the slider. The worm wheel-nut is carried by bearings 9 and rotated by worm 8 one end of which is linked by coupling 7 to electric motor 6 and the other end, to lever 10. Since in the existing metallographic microscopes the free distance of the lens at considerable magnification amounts to tenths of a milli-

Card 1/2

ACC NR: AT7004418

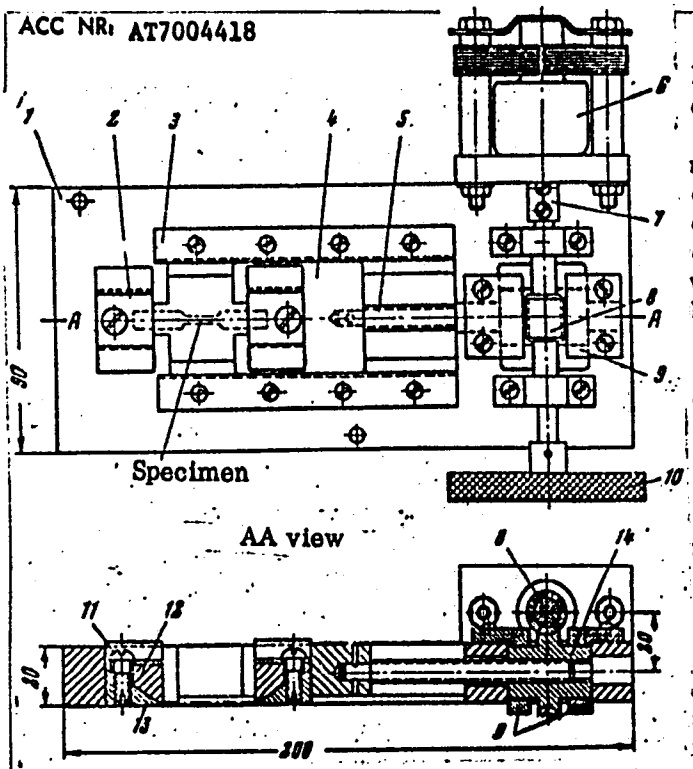


Fig. 1. Microscope attachment for observing the stretching of specimens

meter, the device is equipped with clamps for moving the plane of the specimen closer to the lens. Each clamp consists of upper wedge 12 and lower wedge 13, tightened by screw 11 and held together by plate 2. The edge of the upper wedge, adjoining the head of the specimen, is rounded so as to reduce stresses at the site of flexure of the specimen. The use of clamps of this kind admits the observation of the microstructure of specimens during deformation and fracture at a maximum magnification of 1350 times. Orig. art. has: 4 figures.

SUB CODE: 20/13/ SUBM DATE: 27Sep66

ORIG REF: 005/ OTH REF: 001

Card 2/2

ACC NR: AT7004421 (A) SOURCE CODE: UR/0000/66/000/000/0122/0130

AUTHOR: Osipov, V. G.; Drobysheva, Ye. K.; Amosov, V. M.; Ushakov, Ye. V.; Zelentsova, N. M.; Borisov, A. G.

ORG: none

TITLE: Investigation of the plasticity of VA tungsten during the initial stages of its thermomechanical treatment

SOURCE: AN SSSR. Institut metallurgii. Napryazhennoye sostoyaniye i plastichnost' pri deformirovanii metallov (Stress condition and plasticity during metal deformation). Moscow, Izd-vo Nauka, 1966, 122-130

TOPIC TAGS: tungsten metal powder, plasticity, hot forging, filament wound construction/ / VA tungsten powder

ABSTRACT: The processing of VA tungsten-powder rods involves the occurrence of small transverse surface cracks which may lead to the formation of defects during the drawing and spiralization of these rods into electric-bulb filaments. To uncover and eliminate the causes of this phenomenon tungsten bars measuring 10.5x10.5 mm in cross-sectional area as well as rods with diameters of 3, 5.6 and 10 mm, rotary-forged by different regimes (at 1300, 1450 and 1600°C) with different degrees of reduction of area (7.0 to 36.0%), were subjected to various mechanical tests. The effect of ther-

Card 1/2

ACC NR: AT7004421

momechanical pressworking on the plasticity of tungsten is best revealed by test methods for which the shear stresses are equal or close to normal stresses (i.e. the torsion test). Flattening tests of rods of 10 mm diameter (performed on a crank press) showed that the rods forged at 1300°C with considerable reduction of area display the greatest plasticity over a broad range of temperatures, while bending tests showed that rods forged at 1600°C with normal reduction of area also display satisfactory plasticity. Torsion tests of rods with diameters of 5.6 and 3 mm revealed a decrease in plasticity with increase in test temperature and in reduction of area. The test findings indicate that there exists no direct relationship between the number of surface cracks on the rods and the plasticity and strength properties of the metal. The plasticity of this metal is largely determined by its stressed state and hence the plasticity tests must insofar as possible simulate a stressed state corresponding to a given forging regime. Orig. art. has: 10 fig. and 5 tables.

SUB CODE: 13, 11/ |SUBM DATE: 27Sep66/ ORIG REF: 004

2/2
Card

ACC NR: AT7004422 SOURCE CODE: UR/0000/66/000/000/0130/0134

AUTHOR: Gurevich, Ya. B.; Ushakov, Ye. V.; Drobysheva, Ye. K.; Osipov, V. G.; Orzhekhovskiy, V. L.

ORG: none

TITLE: Plasticity of tungsten in vacuum rolling

SOURCE: AN SSSR. Institut metallurgii. Napryazhennoye sostoyaniye i plastichnost' pro deformirovanii metallov (Stress condition and plasticity during metal deformation). Moscow, Izd-vo Nauka, 1966, 130-134

TOPIC TAGS: ~~sintered~~ tungsten, ~~sintered~~ ~~tungsten~~ metal rolling, ~~sintered~~ ~~tungsten~~ property, ~~sintered~~ ~~tungsten structure~~ powder metal sintering

ABSTRACT: The plastic properties of hydrogen- or vacuum-sintered tungsten and vacuum-arc melted tungsten have been investigated. Specimens 12 x 12 mm were sintered at 1200°C for 2 hr in a hydrogen atmosphere and then in vacuum. An ingot 50 mm in diameter was vacuum-arc melted with a consumable electrode from hydrogen-sintered tungsten. Hydrogen-sintered tungsten failed at a bend angle of 35 degrees, even at temperatures up to

Card 1/2 UDC: none

ACC NR: AT7004422

1100°C, and remained brittle at room temperature. Cast tungsten has an elongation of 1% and reduction of area 3.5%. The respective elongation and reduction of area at 400°C were 2 and 6% for hydrogen-sintered tungsten and 3 and 5% for vacuum-sintered tungsten. The latter has the highest plasticity and can be vacuum rolled with a 61% reduction at 1300°C without failure, compared to 45% for hydrogen-sintered tungsten. Orig. art. has: 2 figures.

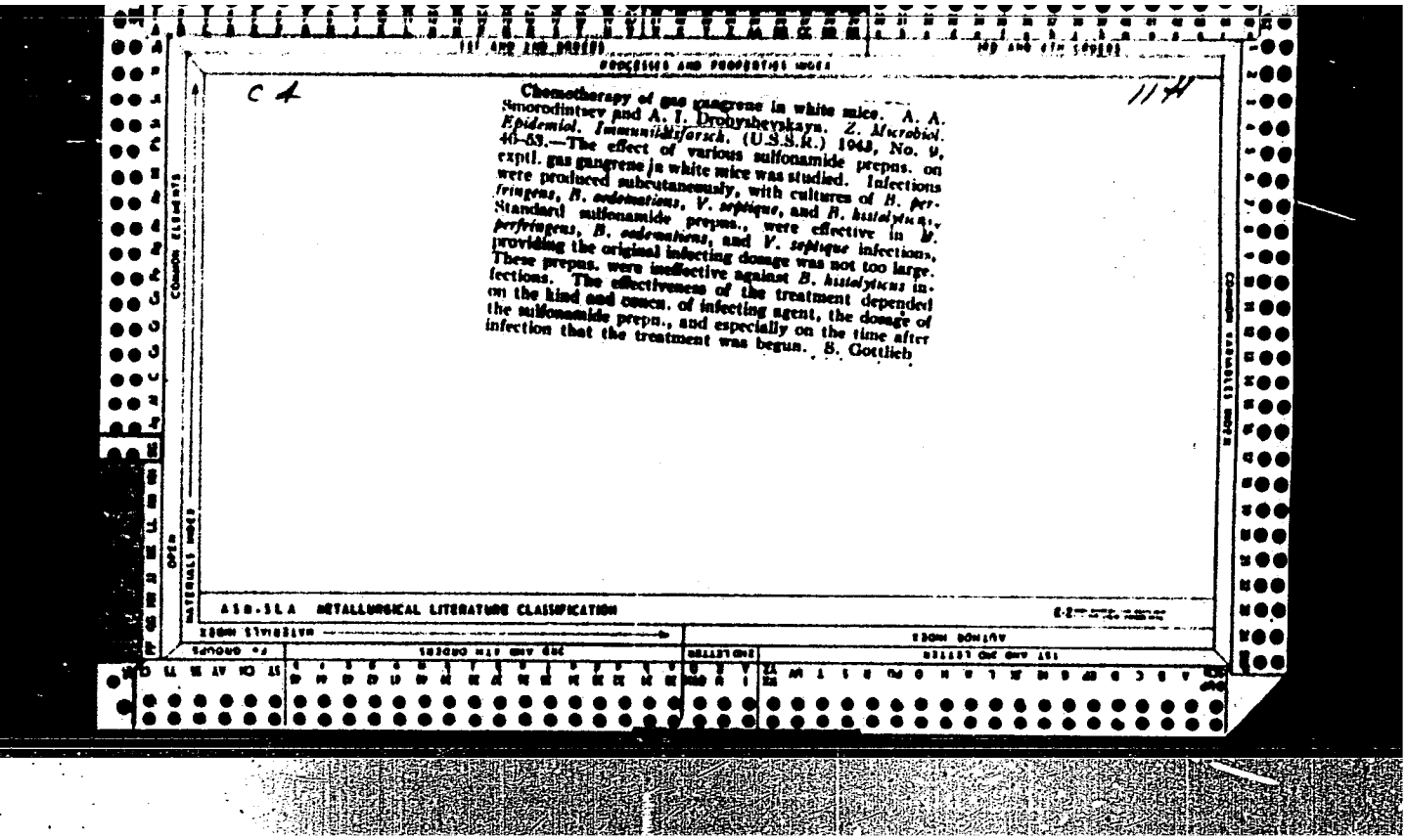
[AZ]

SUB CODE: 11,13/ SUBM DATE: 27Sep66/ ORIG REF: 002/ ATD PRESS:5117

Card 2/2

DAVDISHEVSKAYA, A. I., GLAZUNOV, I. S., SMORODINTSEV, A. A., PETRISHCHEVA, P. A. and NEUSTROYEV, V. D.

"Entomology and Prophylaxis of the Autumnal Form of Encephalitis in Primorskiy Kray," Medgiz, 1941.



C 4

1144

Chemotherapy of gas gangrene in white mice. A. A. Smorodintsev and A. I. Drobyshevskaya. *Z. Mikrobiol. Epidemiol. Immunobiologforsch.* (U.S.S.R.) 1943, No. 9, 40–53.—The effect of various sulfonamide preps. on exptl. gas gangrene in white mice was studied. Infections were produced subcutaneously, with cultures of *B. perfringens*, *B. oedematiens*, *V. septique*, and *B. histolyticus*. Standard sulfonamide preps., were effective in *B. perfringens*, *B. oedematiens*, and *V. septique* infections, providing the original infecting dosage was not too large. These preps. were ineffective against *B. histolyticus* infections. The effectiveness of the treatment depended on the kind and concn. of infecting agent, the dosage of the sulfonamide preps., and especially on the time after infection that the treatment was begun. S. Gottlieb

A 58-5 L A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

ca

1/6

Early diagnosis of typhus fever through detection of a specific antigen in the blood. A. A. Smorodintsev and A. L. [illegible]. *Am. Rev. Soviet Med.* 1, 220-22 (1944) (condensed from an original Russian paper).—A modification of the complement-fixation reaction can be used for rapid serol. diagnosis of typhus fever. The sp. typhus fever antigen can be detected in the patient's serum by 18-hr. interaction at a temp. of 0° with antibodies of a convalescent serum. The intensity of the reaction and the frequency of pos. results are especially great during the initial stages of the disease. The antigens can be detected up to the [illegible] day of illness. The reaction is sp. for typhus fever and is neg. with the serums of patients affected with other types of disease. Examn. of 240 patients demonstrated the possibility of obtaining a correct diagnosis of typhus fever while the Weil-Felix reaction is still neg. W. R. Hean

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

DROBYSHEVSKAYA, A. I.

SMORODINTSEV, A. A., GULAMOV, A. G., and DROBYSHEVSKAYA, A. I. "The bacteriological properties of the upper respiratory tract in epidemic grippe and seasonal catarrhs", Voprosy med. virusologii, Issue 1, 1948, p. 130-52.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 10, 1949).

DROBYSHEVSKAYA, A. I.

SHEN, R. M. and DROBYSHEVSKAYA, A. I. "The morphology of far-eastern tick encephalitis", Voprosy med. virusologii, Issue 1, 1948, p. 302-16, - Bibliog: p. 315-16.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 10, 1949).

DROBYSHEVSKAYA, A. N.

"Etiology and Immunology of Japanese Encephalitis." Dr Med Sci, Inst of Experimental Medicine, Acad Med Sci, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

PA 253T13

DROBYSHEVSKAYA, A. I.

USSR/Medicine - Virus Diseases May 53

"Etiology of the Neurovirus Infection in Two-Stage Viral Meningoencephalitis," A. A. Smorodintsev, A. I. Drobyshevskaya, V. P. Gulamova, V. I. Il'yenko, L. V. Fedorchuk, Dept of Virology, Inst of Expl Med, Acad Med Sci USSR

Zhur Mikro, Epid, i Immun, No 5, pp 47-53

It has been shown that the causative factor of 25-stage meningoencephalitis is a neurotropic virus which resembles that of tick encephalitis. It is similar in its antigenic structure and reactions to the viruses of Western tick encephalitis and Scotch encephalitis, but can be distinguished from them by reason of its different action on white mice. Two-stage meningoencephalitis has nothing in common with listerellosis.

253T13

253T13

SHORODINTSEV, A.A.; ALEKSEYEV, B.P.; GULAMOVA, V.P.; DROBYSHEVSKAYA, A.I.; IL'YENKO, V.I.; KLENOV, K.N.; CHURILOVA, A.A.

Epidemiologic characteristics of biphasic virus meningo-encephalitis. Zhur. mikrobiol.epid. i immun. no.5:54-59 My '53. (MLRA 6:8)

1. Otdel virusologii Instituta eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR i tulyaremiynoy stantsii.
(Brain--Inflammation) (Meningitis)

DROBYSHEVSKAYA, A.I.

SMORODINTSEV, A.A.; DROBYSHEVSKAYA, A.I.; IL'YENKO, V.I.

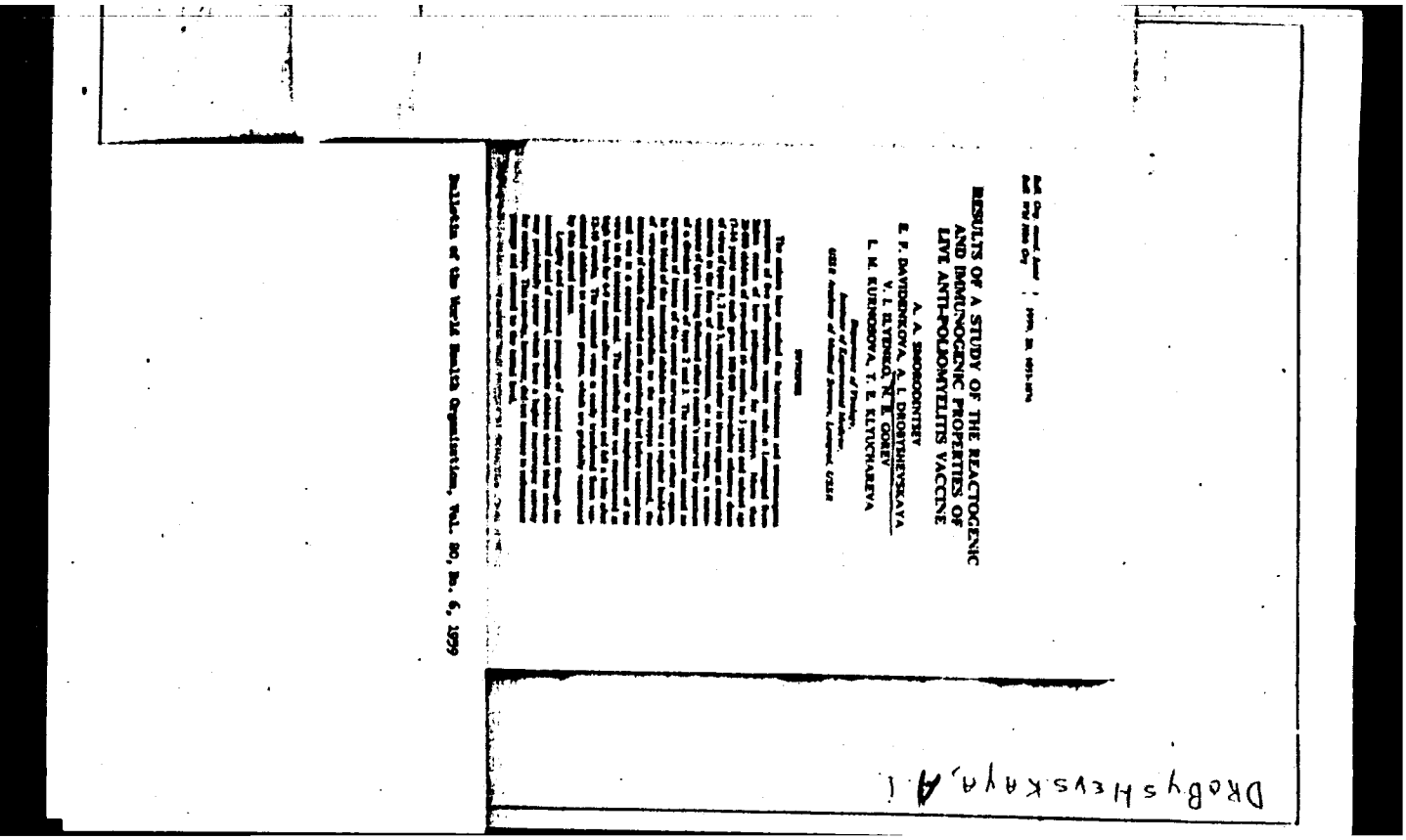
Etiology and immunology of "two-wave" virus meningo-encephalitis. Nov.med. no.38:44-51 '53. (MLRA 7:5)

1. Iz Otdela virusologii Instituta eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR. (Brain--Inflammation)

DROBYSHEVSKAYA, A.I.

Etiology and immunology of Japanese encephalitis. Nov.med. no.38:63-70 '53. (MLRA 7:5)

1. Iz Otdela virusologii Instituta eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (zaveduyushchiy - chlen-korrespondent A.A. Smorodintsev). (Brain--Inflammation)



RESULTS OF A STUDY OF THE REACTOGENIC AND IMMUNOGENIC PROPERTIES OF LIVE ANTI-POLIOMYELITIS VACCINE

A. A. SMORODINTSEV
E. F. DAVIDENKOVA, A. L. DROZDOVSKAYA
V. I. ELYZHOV, N. E. GOREV
L. M. KUZNETSOVA, T. E. KLYUCHAREVA

Bulletin of the World Health Organization, Vol. 20, No. 6, 1959

Drobyshevskaya, A.I.

DROBYSHEVSKAYA, A.I.

Vol 03, No 10, 1960

Immunological and Epidemiological Effectiveness of Live Poliomyelitis Vaccine in the USSR *

A. A. SMORODINTSEV, A. I. DROBYSHEVSKAYA, N. P. BULYTSHEV
O. M. CHALKINA, G. M. GROSSMAN, V. I. ILYENKO, E. A. KANTOROVICH
L. M. KUDINOVA, K. G. VASILYEV, V. I. VOYTAKOV, & G. P. ZHILOVA

Bulletin of the World Health Organization, Vol. 23, No. 6, 1960.

*From the Virus Department, Inst. of Experimental Medicine, USSR Acad. Med. Sci.

SMORODINTSEV, A.A.; DROBYSHEVSKAYA, A.I.; BULYCHEV, N.P.; VASIL'YEV, K.G.; VOTYAKOV, V.I.; GROYSMAN, G.M.; ZHILOVA, G.P.; IL'YENKO, V.I.; KANTOROVICH, R.A.; KURNOSOVA, L.M.; CHALKINA, O.M.

Material on the immunological and epidemiological effectiveness of live poliomyelitis vaccine. Vest. AMN SSSR 15 no.6:45-58 '60. (MIRA 14:4)

1. Otdel virusologii Instituta eksperimental'noy meditsiny AMN SSSR. (POLIOMYELITIS)

PIGAREVSKIY, V.E.; DROBYSHEVSKAYA, A.I.

Morphological study of cellular defense factors in experimental meningopneumonia virus infection of white mice. Acta virol. 6: 544-549 '62.

1. Dept. of Morbid Anatomy--Laboratory of Morphology of Infectious Diseases and Dept. of Virology, Institute of Experimental Medicine, U.S.S.R. Academy of Medical Sciences, Leningrad.
(MIYAGAWANELLA) (VIRUS DISEASES)
(RESPIRATORY TRACT INFECTIONS)

DROBYSHEVSKAYA, A.I.; PIGAREVSKY, V.E.; SMORDINTSEV, A.A.

Activity of phagocytic factors in experimental infection of white mice with mouse pneumonia and meningopneumonia viruses. Acta virol. Engl. Ed. Praha 6 no.5:458-470 S '62.

1. Dept. of Virology and Dept. of Morbid Pathology--Laboratory of Morphology of Infectious Diseases, Institute of Experimental Medicine, U.S.S.R. Academy of Medical Sciences, Leningrad.
(VIRUS DISEASES exper.) (PNEUMONIA exper.)

DROBYSHEVSKAYA, N.I.; MURAV'YEVA, N.B.

Effect of the chemical composition of the salts composing a section of a well on the quality of the drilling fluid. Burenie no.6:8-10 '64. (MIRA 18 5)

1. Konstruktorskoye byuro neftegazovoy promyshlennosti ob"yedineniya "Saratovneftegaz".

DROBYSHEVSKAYA, Nadezhda Ivanovna

PHASE I BOOK EXPLOITATION 484

Anikin, Nikolay Aleksandrovich; Drobyshevskaya, Nadezhda Ivanovna; Dudinov, Vladimir Alekseyevich; Kon'kov, Arkadiy Sergeyevich; Polyakov, Gleb Maksimovich

Spravochnik izobretatelya i ratsionalizatora (Inventor's and Innovator's Handbook) Moscow, Mashgiz, 1957. 702 p. 35,000 copies pringed.

Ed.: Rozenberg, I. A., Candidate of Economic Sciences; Akhun, A. I., Konovalov, V. I., Peretts, V. B., Belinicher, I. Sh., Dubitskiy, G. M., Canditates of Technical Sciences; Kanyukhov, S. M., Docent; Zakharov, B. P., Gaktina, R. F., and Vakhonin, L. N., Engineers; Tech. Ed.: Sarafannikova, G. A.

PURPOSE: This handbook is intended for workers and foreman.

COVERAGE: The book contains information on processing, formulation, and justification of beneficial suggestions and inventions. It presents data on mathematics, mechanics, electrical engineering, hydraulics, and other technical branches of science, as well as data on the selection of machine

Card 1/27

building materials (properties and designation), the design of machine parts, and the technology of their manufacture. The tasks and rights of inventors and efficiency experts are discussed. The text is illustrated with examples of efficiency-promoting suggestions and typical calculations.

TABLE OF CONTENTS:

14(5) SOV/92-58-9-7/36

AUTHORS: Moldavskiy, O.P., and Drobyshevskaya, N.I., Members of the VNIGNI

TITLE: Prevention of Caving (Bor'ba s obvaloobrazovaniyem)

PERIODICAL: Neftyanik, 1958, Nr 9, pp 8-9 (USSR)

ABSTRACT: The authors state that the drilling of boreholes at the Goryuchkinskaya geological platform (Saratov region), combined with the use of water, mud or other liquids as drilling fluids leads to caving of argillaceous sandy series of the Upper Carboniferous sediments. This caving complicates the drilling operation and renders it very difficult. Therefore in 1956 - 1957 the VNIGNI (All-Union Petroleum Scientific Research Institute for Geological Survey) assisted by local drillers, studied the possibility of reinforcing the caving arenaceous and argillaceous series. The formation was first flushed and then the resultant cavities were cemented. The authors describe in detail the procedure applied to borehole No.17 at the interval between

Card 1/2

756 - 788 m, where argillaceous sandy series were 32 m thick. Results of experiments were found satisfactory and further similar tests were conducted at the Kolotovskaya platform of the Saratov region. The reinforcement of clay and sandy formations by flushing them and cementing the resultant cavities eliminates the risk of tool stalling and other complications. It also makes possible the use use of water instead of mud when carboniferous sediments are reached. The discussed method of reinforcing the argillaceous sandstone formations has now been introduced in all wells of the Goryuchkinskaya and Kolotovskaya platforms.

ASSOCIATION: Nizhne-Volzhskiy filial VNIGNI (The Lower Volga Branch of the VNIGNI)

Card 2/2

DROBYSHEVSKAYA, N.I.; MURAV'YEVA, N.B.

Using formation waters and lime muds in well drilling. Trudy VNIGNI no.28:206-212 '60. (MIRA 14:4)

1. Nizhne-Volzhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo geologo-razvedochnogo neftyanogo instituta.
(Oil welldrilling fluids)

ANIKIN, Nikolay Aleksandrovich; DROBYSHEVSKAYA, Nadezhda Ivanovna; DUDINOV, Vladimir Alekseyevich; KON'KOV, Arkadiy Sergeyevich; KONYUKHOV, Sergey Mikhaylovich; MESHCHERINOV, Fedor Ivanovich; POLETSKIY, Aleksandr Timofeyevich; POLYAKOV, Gleb Maksimovich; SAL'NIKOV, Oleg Alekseyevich; CHERNOBAY, Dmitriy Gavrilovich; GAVRILOV, P.G., kand. tekhn.nauk, retsenzent; NEFED'YEV, G.N., kand. fiz.-mat. nauk; SOKOLOV, V.M., kand. fiz.-mat. nauk; SOKOLOVSKIY, V.I., kand. tekhn. nauk; RUDIN, S.N., inzh.; EYDINOV, M.S., kand. tekhn. nauk; DUBITSKIY, G.M., doktor tekhn. nauk, red.; ZAKHAROV, B.P., inzh., red.; KONOVALOV, V.N., kand. tekhn. nauk, red.; PERETS, V.B., kand. tekhn. nauk, red.; ROZENBERG, I.A., kand. ekonom. nauk, red.; STEPANOV, V.V., kand. tekhn. nauk, red.; SUSTAVOV, M.I., inzh., red.; SHABASHOV, S.P., kand. tekhn. nauk, red.; DUGINA, N.A., tekhn. red.

[Handbook for inventors and innovators]Spravochnik dlia izobretatelia i ratsionalizatora . [By] N.A.Anikin i dr. Izd.3., ispr. i dop. Moskva, Mashgiz, 1962. 791 p. (MIRA 16:1)
(Technological innovations—Mechanical engineering)

DROBYSHEVSKAYA, T.

USSR/Soil Science - Mineral Fertilizers. J-3

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5786

Author : Drobyshevskaya, T.
Inst : -
Title : The Effectiveness of Fertilizing With Granulated Superphosphate.

Orig Pub : S. kh. Kirgizii, 1956, No 3, 10-13

Abstract : This is a study of the effectiveness of granulated superphosphate when applied in the rows, using winter and spring wheat and oats, on irrigated and non-irrigated land, in the Oshaskaya and Frunzenskaya oblast's. In comparison with powdered superphosphate it proved considerably more effective. When applied in the rows the best norm is 50 kg./hectare. Organophosphorous superphosphate (100 kg./hectare with a 1:1 weight relationship, and with the granular diameter of 2-5 mm.) is as good as mineral superphosphate.

Card 1/1

DROBYSHEVSKIY, B.

White Russian S.S.R. Avt.transp. 35 no.10:9 O '57. (MIRA 10:10)

1.Nachal'nik Glavnogo upravleniya avtomobil'nogo transporta pri Sovete Ministrov BSSR.
(White Russia--Transportation, Automotive)

USSR / Human and Animal Morphology, Normal and Pathological. S
Digestive System.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35912

Authors : Berkovskiy, E. M.; ~~Drobyshevskiy, B.L.~~
Inst : Ukrainian Institute of Stomatology.
Title : Age Changes of the Argurophil Substance in the Dental Pulp.

Orig Pub : Tr. Ukr. in-ta stomatol., 1957, vyp. 2,113-118.

Abstract : None given

Card 1/1

L 20932-66 EWT(d)/EWT(1)/EWT(m)/EWP(f)/T-2/ WW

ACC NR: AP6002576 (A) SOURCE CODE: UR/0286/65/000/023/0070/0070

AUTHORS: Reshes, L. L.; Drobyshevskiy, Ch. B.; Zharnov, E. M.; Rychago, A. D.; Fradin, V. Ye.

ORG: none

TITLE: Decompression device for internal combustion engines. Class 46, No. 176749

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 70

TOPIC TAGS: internal combustion engine component, decompressor

ABSTRACT: This Author Certificate presents a decompression device for internal combustion engines. The device contains a distributing shaft with cylindrical decompression cams placed under the distributor valve lifters. To decrease the harmful volumes in the cylinders, the cams are made with cutouts of a prescribed shape for smooth fitting of the valves into the valve seats when the piston reaches top dead center.

1/2

UDC: 621.43.066

L 20932-66
ACC NR: AP6002576

Fig. 1. 1 - distributing shaft; 2 - decompression cams; 3 - lifters; 4 - slice.

Orig. art. has: 1 diagram.

SUB CODE: 21/ SUBM DATE: 20Oct62

2/2 ULR

ACCESSION NR: AP4006835 S/0120/63/000/006/0145/0149

AUTHOR: Droby*shevskiy, E. M.

TITLE: Method of photoelectric scanning of the Doppler shift of a spectral line

SOURCE: Pribory* i tekhnika eksperimenta, no. 6, 1963, 145-149

TOPIC TAGS: Doppler shift scanning, spectral line, Doppler shift, Doppler effect, rotating plasma, scanning

ABSTRACT: A. N. Zaydel', et al. (Zh. tekhn. fiz., 1960, v. 30, no. 12, p. 1437) suggested detecting the directional collective motion of ions by the longitudinal division of their spectral line and by photomultiplying the luminous fluxes separately. When the spectral line shifts, the equality of the two fluxes is upset, and a two-beam oscillograph records two different-amplitude signals. The cophasal or counterphasal variation of the signals revealed the ordered ion motion and its direction. Further perfection of this method by the author

Card 1/4

ACCESSION NR: AP4006835

resulted in the possibility of measuring the velocity of ions by time-scanning a slant-divided spectral line. The minimum angle between the slanted dividing line and the vertical ensures a maximum instrument precision. The velocity of plasma rotation was measured in a homopolar chamber with a 196-mm-diameter outer electrode and a 68-mm-diameter inner electrode, with a 25-mm distance between the pyrex walls. The magnetic field intensity was 5 koerst. Plasma was created by discharging a IM5-150 capacitor at 6 kv; the current was about 90 kamp after 16 microsec. Air pressure before the discharge was 0.1 torr. Details of the outfit are shown in Enclosure 1. Plasma velocity was measured by the shift of the neutral nitrogen line 4,358.27 A and found (from a spectrum photo) to be equal to 25 km/sec. Oscillograms showed that in 10 microsec, the plasma velocity apparently reached 45 km/sec; vaporization of the electrodes and walls of the chamber may be responsible for the above discrepancy. "The author wishes to thank K. V. Donskoy and D. N. Mirshanov for their valuable advice and useful discussions." Orig. art. has: 3 figures and 6 formulas.

ASSOCIATION: Physico-Technical Institute, AN SSR)

Card 2/3

DROBYSHEVSKIY, E.M.

Volt-ampere characteristics of a homopolar discharge tube.
Zhur. tekh. fiz. 33 no.10:1210-1213 O '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR, Leningrad.

DONSKOY, K.V.; DROBYSHEVSKIY, E.M.; NAZAROV, Ye.V.

Ion wind effect on the rotation of a plasma in mutually opposed fields. Zhur. tekh. fiz. 33 no.11:1328-1332 N '63. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

DROBYSHEVSKIY, E.M.

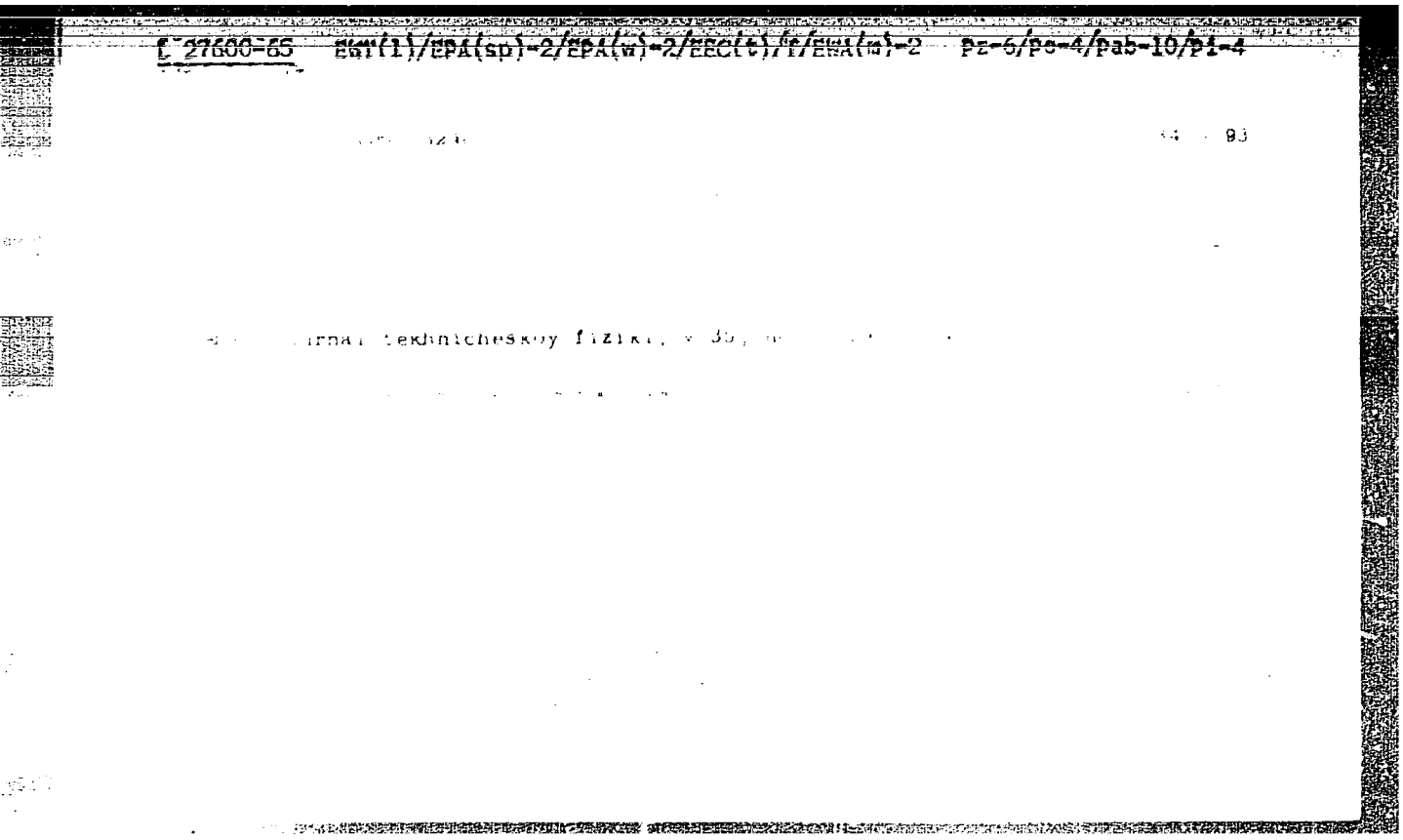
Effect of the Hall current on a rotating plasma in mutually opposed fields. Zhur. tekh. fiz. 33 no.11:1338-1343 N '63. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

DROBYSHEVSKIY, E.M.; CHEKMAREV, I.B.

Rotation of a weakly ionized gas in a homopolar discharge tube with a radial magnetic field. Mag. gidr. no.3:76-80 '65.

(MIRA 18:10)



L 27600-65 EWT(1)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWA(m)-2 Pz-6/Pe-4/Pab-10/P1-4

... 83

... Zhurnal tekhnicheskoy fiziki, v. 35, ...

L 27600-65

ACCESSION NR: AP5003240

[illegible] between the outer and inner electrodes [illegible] an inclined oil [illegible]

[illegible] parameters of the system [illegible]

Card 2/3

L 27600-65

ACCESSION NR: AP5003240

...matter as a consequence of the inhomogeneity of the magnetic field. When the ...

... Institute, AN SSSR)

SUBMITTED: 26Dec63 ENCL: 00 SUB CODE: ME

NR REF SOV: 005 OTHER: 006

Card 3/3

L 3619-66 EWT(1)/ETC/EWG(m)/EPA(w)-2 LJP(c) AT

ACCESSION NR: AP5024030 UR/0057/65/035/009/1558/1567

AUTHOR: Drobyshevskiy, E. M.; Chekmarev, I. B.

TITLE: The positive column in the inverse homopolar device

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 9, 1965, 1558-1567

TOPIC TAGS: discharge plasma, electric field, magnetic field, plasma conductivity, plasma stability, plasma temperature, mathematic physics, magnetchydrodynamics, hydrogen plasma

ABSTRACT: The "direct" homopolar device consists of two coaxial cylindrical electrodes with a radial electric field and an axial magnetic field in the plasma-filled annular space between them. The "inverse" homopolar device discussed in this paper has cylindrical dielectric walls, a radial magnetic field, and an axial electric field. The plasma is assumed to be weakly ionized, so that collision of electrons and ions are almost entirely with neutral atoms. The magnetic field strength is assumed to be such that the electron Larmor frequency is much higher than the electron collision frequency and the ion Larmor frequency is much lower than the ion collision frequency. The plasma is treated in the hydrodynamic approximation. The equations were solved on a computer for the case of a hydrogen

Card 1/2

L 3619-66

ACCESSION NR: AP5024030

4

plasma, and the results are presented graphically. At high magnetic field strengths the ion temperature can exceed the electron temperature. When this occurs the discharge becomes unstable and the electric field strength required to maintain the discharge increases. This theoretically derived instability is employed to explain the instability of the homopolar device observed experimentally by K.V.Donskoy and E.M. Drobyshevskiy (ZhTF, 35, 84, 1965). "The authors express their gratitude to V. Ye. Golant for useful discussion and much valuable advice." Orig. art. has: 52 formulas and 6 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 07Jan65 ENCL: 00 SUB CODE: ME

NO REF SOV: 007 OTHER: 004

Card 2/2

L 19278-66 EWT(1)/T IJP(c)

ACC NR: AP5024905 UR/0382/65/000/003/0076/0080

AUTHOR: Drobyshevskiy, B.M.; Chekmarev, I.B.

ORG: None

TITLE: Rotation of a weakly ionized gas in a homopolar magnetohydrodynamic generator with a radial magnetic field

SOURCE: Magnitnaya gidrodinamika, no. 3, 1965, 76-80

TOPIC TAGS: magnetohydrodynamic theory, plasma rotation

ABSTRACT: Azimuthal motion of a rarified weakly ionized plasma in crossed (radial magnetic and axial electric) fields between two coaxial dielectric cylinders is discussed. Plasma and glow result from the passage of an axial electric current. The gas density is assumed low enough to have the main loss of charged particle occur due to diffusion to the walls, yet sufficiently high to justify a hydrodynamic analytical approach. At a constant gas density ρ, and viscosity coefficient η, the gas motion is described by the equation (1)

$$\rho(v\nabla)v=-\nabla p+j\times B+\eta\Delta v, \quad \operatorname{div} v=0, \qquad (1)$$

where: v - gas velocity, j - current density and B - magnetic field strength. Assumption of a negligible magnetic Reynold's number ($R_m \ll 1$) permits to consider B as

$$B \equiv B_r = B_0 R_2/r \qquad (2)$$

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ACC NR: AP5024905

where R_2 is the radius of the outer cylinder. Several additional assumptions, including negligible Hartman's number, M, - permit to write a system of equations for the determination of current density from the concentrations of the n_e and n_i charged particles. Subsequent analysis leads to expressions for diffusion flow and for relations between temperature, ion energy and electric field strength. An example of gas discharge in molecular hydrogen as the plasma is worked out. In particular, the distribution of charged particle densities, the rotational gas velocity and the axial current density distribution are computed electronically as a function of the radius ratio $x = r/R_2$ - for various magnetic field strengths. Due to nonuniformity of the magnetic field, the temperature of electrons is a function of the radius variable, and the necessity of applying a strong electric field causes the ionic component to gain energy of directional movement in the axial direction, of the order of 1 - 10 eV. Orig. art. has 3 figs., 22 formulas.

SUB CODE: 20 Subm DATE: 22Nov64/ ORIG REF: 003 Oth REF: 001

Card 2/2

L 10067-67 EWT(m)/EWP(w) IJP(c) WW/EM

ACC NR: AP6029978 SOURCE CODE: UR/0413/66/000/015/0192/0192

32

INVENTORS: Drobyshevskiy, E. M.; Rozov, S. I.

ORG: none

TITLE: Method for active damping of vibrations in patterns. Class 42, No. 183976

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 192

TOPIC TAGS: vibration simulation, vibration transmission, vibration damping, vibration, mechanical vibration

ABSTRACT: This Author Certificate presents a method for active damping of vibrations set up in models immersed in a stream of liquid or gas. The method is based on subjecting a model to a force proportional to and of opposite phase to the force of vibrations. To avoid the use of a counterweight as the damping force transducer, the damping force is transmitted to the specimen by periodically changing the aerodynamic parameters of the fluid flow, viz., rate of flow and density of fluid.

SUB CODE: 13, 20/ SUBM DATE: 25Jun63

Card 1/1 UDC: 620.178

L 02283-67 EWT(1) IJP(c) AT
ACC NR: AP6025241 SOURCE CODE: UR/0057/66/036/007/1175/1185

57
54
B

AUTHOR: Drobyshevskiy, E.M.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: The positive column in an inclined magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1175-1185

TOPIC TAGS: plasma magnetic field, electric field, plasma conductivity, plasma diffusion, hydrogen plasma, plasma electron temperature

21

ABSTRACT: The author discusses the behavior of a plasma confined between infinite plane dielectric walls parallel to the xy plane of a Cartesian coordinate system xyz, in the presence of a uniform electric field parallel to the x axis and a magnetic field that is parallel to the xz plane and is uniform but has different directions in the two regions into which the space occupied by the plasma is separated by a plane parallel to the dielectric walls but not necessarily midway between them. The calculations were undertaken because of unexpected results obtained by the author and S.I.Rozov (ZhTF 36, 1186, 1966 / see Abstract AP6025242/) in experiments with the homopolar device. The plasma is assumed to satisfy conditions given in an earlier paper by the author and I.B.Chekmarev (ZhTF 35 2558, 1965), and that paper is cited

Card 1/2 UDC: 533.9

L 02283-67
ACC NR: AP6025241

3

for some of the equations and notation employed in the present calculations. The plasma is assumed to be produced by ionization of neutral molecules by electrons that have been accelerated by the electric field, and recombination is assumed to take place on the dielectric walls, which the electrons and ions reach by ambipolar diffusion. Equations are derived from which the current, electron density, and electron temperature can be calculated as functions of z. These equations were solved numerically for a hydrogen plasma for a number of different values of the pressure, the electric and magnetic field strengths, and the magnetic field inclinations, and the results are tabulated, presented graphically, and discussed at some length. It is shown that small inclinations of the magnetic field to the z axis can have large effects on the current distribution and that a "bent" magnetic field can exert a strong focusing or defocusing effect on the current, depending on whether its directions are such as to hinder or to aid the ambipolar diffusion of the electrons to the dielectric walls.The author thanks A.D.Piliya, S.I.Rozov, and I.B.Chekmarev for valuable advice and discussions. Orig. art. has: 29 formulas, 5 figures, and 1 table.

SUB CODE: 20 SUBM DATE: 10Mar65 ORIG. REF: 005 OTH REF: 002

Card 2/2 vmb

L 02282-67 EWT(l) IJP(c) AT

ACC NR: AP6025242 SOURCE CODE: UR/0057/66/036/007/1186/1197

AUTHOR: Drobyshevskiy, E. M.; Rozov, S. I.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Investigation of the current density distribution in the homopolar device

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1186-1197

TOPIC TAGS: plasma magnetic field, electric field, plasma conductivity, hydrogen plasma, air nonhomogeneous magnetic field

ABSTRACT: The authors have investigated the effect of deviations of the magnetic field from uniformity on the distribution of current at the outer electrode of the homopolar device. The device consists of two coaxial cylindrical electrodes closed at the ends by plane dielectric walls, mounted in an axial magnetic field, and containing plasma in the space bounded by the electrodes and the dielectric end walls. The homopolar device employed in the present experiments was 3.6 cm long with a 9.8 cm radius outer electrode and a 3.4 or 6.75 cm radius inner electrode; it was filled with air or hydrogen at from 0.25 to 1.0 mm Hg and was mounted in a 2.5 kOe field. Seven aluminum foil probes were mounted with 0.5 mm gaps between them approximately 1 mm above the inner surface of the outer electrode in order to measure the axial distribution of the current. While the current to one probe was being measured the other

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probes were grounded to the electrode. The uniformity of the magnetic field was disturbed in an axially symmetric manner by altering the shapes of the pole pieces. In general the current distribution was rather sharply peaked when the inner electrode was negative and rather flat when the inner electrode was positive. Deviations of the magnetic field from uniformity considerably affected the current distribution, and with both polarities the magnetic field configuration near the anode was more significant than that near the cathode. Many current distribution curves are presented and are discussed at some length, largely in terms of the focusing effects discussed in an accompanying theoretical paper by E.M.Drobyshevskiy (ZhTF, 36, 1175, 1966/see Abstract AP6025241/). Under some conditions current distributions with three maxima were obtained. These are explained in terms of the focusing and defocusing effects with the aid of calculations similar to those in the paper cited above, but for a more complex field configuration. The calculations are relegated to an appendix. There is also an appendix on ion diffusion in the homopolar device. Ion diffusion was not significant in most of the present experiments. The authors thank Professor Yu.A.Dunayev and Candidate E.V.Donskiy for their interest and for valuable discussions. Orig. art. has: 11 formulas, 8 figures and 1 table.

SUB CODE: 20 SUBM DATE: 10Mar65 ORIG. REF: 005 OTH REF: 001

L 45981-66 EWT(l)/EWT(m)/T DS

ACC NR: AP6028627 SOURCE CODE: UR/0057/66/036/008/1501/1506

AUTHOR: Donskoy, K.V.; Drobyshevskiy, E.M.; Rozov, S.I.

79
B

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Measurement of the electric field strength in the homopolar device

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 8, 1966, 1501-1506

TOPIC TAGS: gas discharge plasma, magnetic field, electric field, air, hydrogen, argon

ABSTRACT: The authors have measured the electric field strength in a homopolar device consisting of two 7.2 cm long, 6.8 and 19.6 cm diameter coaxial cylindrical electrodes mounted in the 7.8 cm gap between 29.5 cm diameter pole pieces with 5.2 cm diameter openings. The axial magnetic field (up to 2.5 kOe) was uniform within 2% throughout the working volume. The device contained air, hydrogen, or argon at pressures from 0.125 to 1.0 mm Hg. The electric field strengths were measured with a double probe consisting of two 0.2 mm diameter 3-4 mm long platinum wires mounted 4-6 mm apart. The electric field strength was not at all inversely proportional to the distance from the axis, as it would be if the resistivity of the medium were constant, but tended to increase toward the anode. As a rough approximation, especially in the case of negative polarity, the electric field could be regarded as constant within the volume of the device, and equal to its value at the mean radius. Except in hydrogen at high

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magnetic field strengths, the electric field strength was proportional to the magnetic field strength. The electrode potential drops were determined by measuring the potential difference between the electrode concerned and one of the probe wires, positioned 3 mm from it. Both the anode and cathode drops increased with increasing magnetic field strength, but the authors are unable to draw any definite conclusions concerning the effect of the magnetic field on the thickness of the region in which the electrode drops take place. Randomly appearing cathode spots were nearly always visible. In hydrogen the cathode drop increased more rapidly with increasing magnetic field strength in magnetic fields stronger than 1 kOe than in weaker fields. This behavior is tentatively ascribed to disruption of the oxide film on the electrode by higher energy hydrogen ions, which facilitates field emission of electrons. Orig. art. has: 3 figures.

SUB CODE: 20 SUBM DATE: 24Jun66 ORIG. REF: 007 OTH REF: 004

Card 2/2

DROBYSHEVSKIY, G., letchik-ispytatel'; MAKAROV, K., inzhener.

Special problems in operating helicopters under difficult meteorological conditions. Grazhd.av.13 no.7:17-18 Jl '56. (MLRA 9:9)
(Helicopters)

DROBYSHEVSKIY, G.

Attention to the needs of schoolchildren. Sov. profsoiuzy 5 no.5:46-49 My '57. (MIRA 10:6)
(Camps)

L 04529-67 FDN
ACC NR: AP6030638 (A) SOURCE CODE: UR/0413/66/000/016/0151/0151

INVENTOR: Borodach, A. I.; Drobyshevskiy, G. P.

4
B

ORG: none

TITLE: A white smoke signal cartridge. Class 78, No. 185247

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 151

TOPIC TAGS: wind direction signal, signal cartridge, landing signal, helicopter signal, airplane signal

ABSTRACT: An Author's Certificate has been issued for a signal cartridge of white smoke to be ejected from an airplane or helicopter for determining the direction of the wind in a landing area. The signal cartridge consists of a case with a lid, a stabilizer, and an impact mechanism. In order to ensure smoke formation at a reaction temperature without setting fire to dry branches, grass, etc., the casing contains a mixing chamber (tube) and a glass ampoule filled with phosphorus trichloride and is filled with a 25% aqueous ammonia solution. The ingredients in a weight ratio of 1 to 6 will form white smoke when mixed together. [Translation]

Card 1/1 SUB CODE: 01/ SUBM DATE: 20May65/ UDC: 662.175